# Restoration in the Truckee River Watershed

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Truckee River Watershed
Council



# The mission of the TRWC is to bring the community

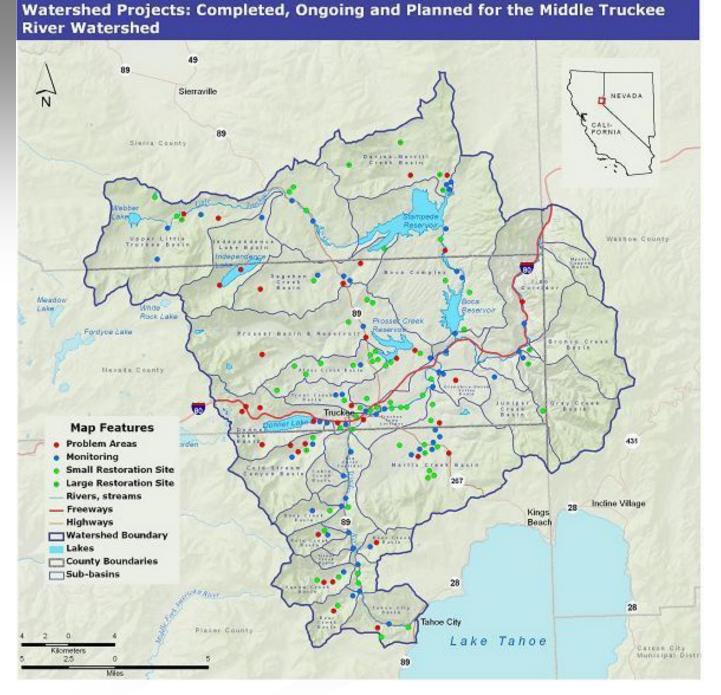
Together for the Truckee

We restore, enhance and protect the Truckee River watershed

#### **Work Areas**

- Riparian, meadow and wetland restoration
- Collaboration and coordination on water quality and riparian resources
- Community Awareness

- 7 dams
- Five 303(d) listed waters
- 2 clear cuts
- Railroad
- Interstate
- Gravel mining
- Grazing



#### **Davies Merrill Restoration**

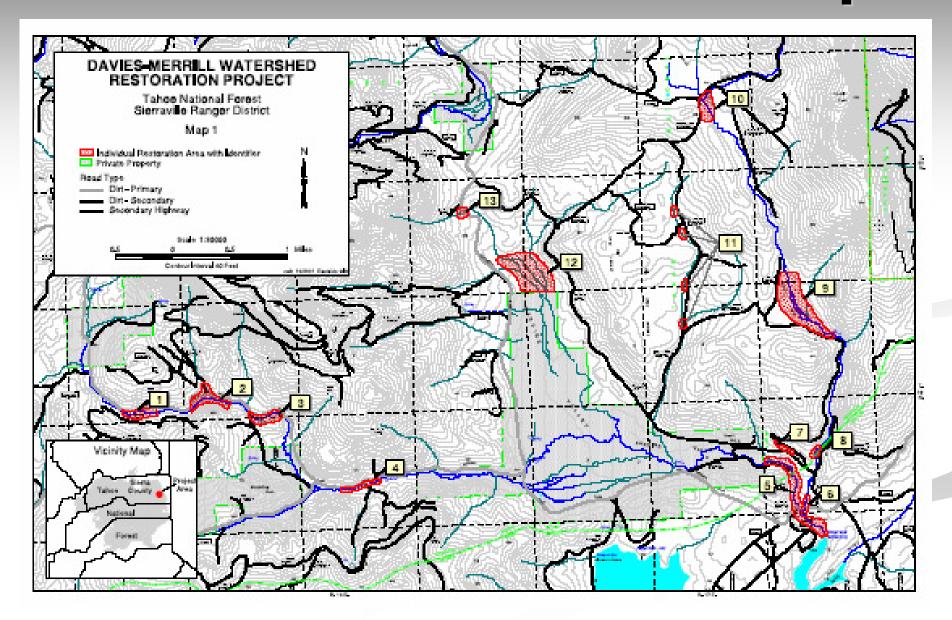
- Reduce active erosion
- Improve wetland and riparian habitat







## **TRWC & USFS Partnership**



# Water quality and habitat degradation

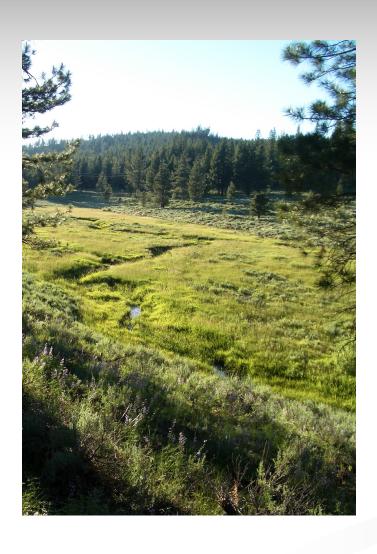
- Sedimentation
  - Affects physical and chemical properties of water
  - Degrades fish & macroinvertebrate habitat
- Lowered water tables
  - Reduces meadow size and quality
  - Decreases riparian vegetation

# What's the problem?

- Historic railroad grades
- Stream diversion
- Floodplain restriction



# What's the problem?



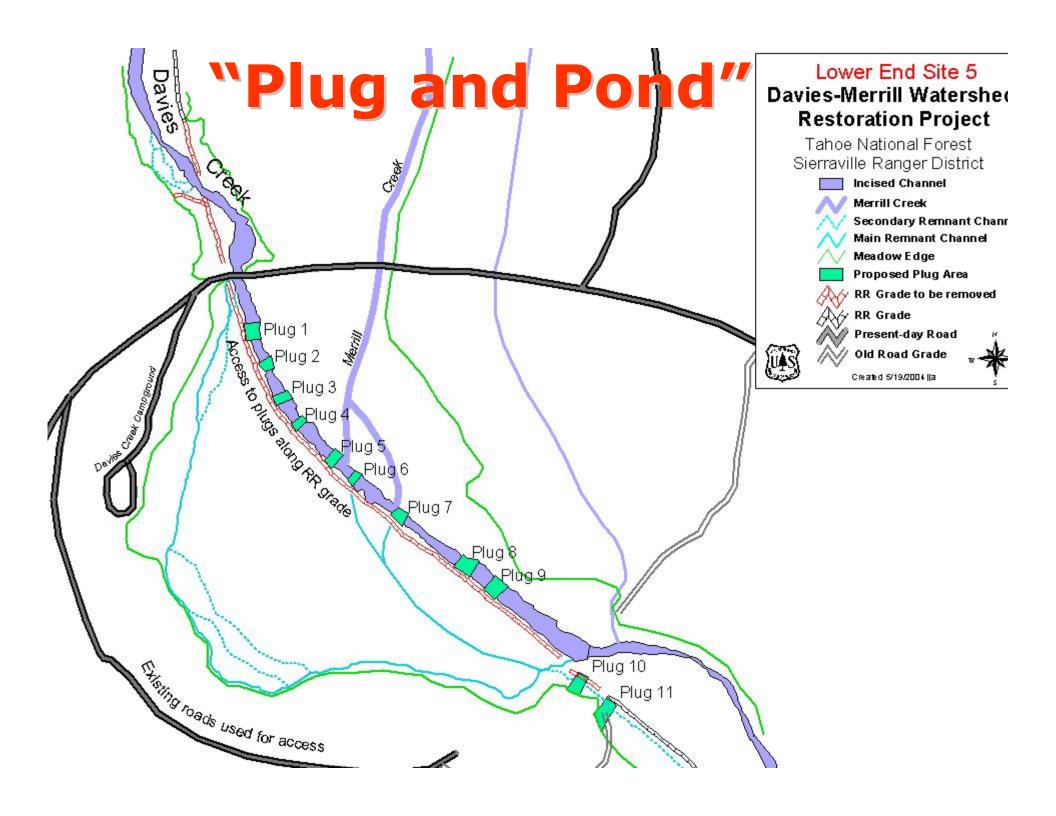
- Incised channels
- Increased erosion
- Excessive sedimentation



#### What can we do?

- Remove railroad grades
- Restore natural hydrologic pattern
- Restore floodplain area





#### **Existing channel**





#### **Remnant channel**





#### **2005** work

- Removal of grade at site 6
- Plug and pond at Lower Site 5
- Re-vegetation work at Site 5







#### 2006 work

- Plug and pond at sites 2 & 12
- Extensivevolunteer re-vegetation effort
- Installed groundwater monitoring wells
- Began vegetation monitoring





#### 2007 work





- Completed site 2 &12
- Plug and Pond site3
- Remove old road site 4
- Continue monitoring





# Monitoring results

- Vegetation monitoring shows slight decrease in sagebrush
- Water table monitoring in progress
- Bioassessment in progress



#### **Sediment reduction**





- Estimated annual reduction of 500 cy fine sediment from active erosion
- Undetermined amount from upper watershed

#### **Project Partners & Funding**

- Truckee River Watershed Council
- U.S. Forest Service
- State Water Resources Control Board
  - 319h and Prop 13
- Sierra Nevada Alliance
- Bella Vista Foundation
- Sierra Nevada Conservancy

# Questions?

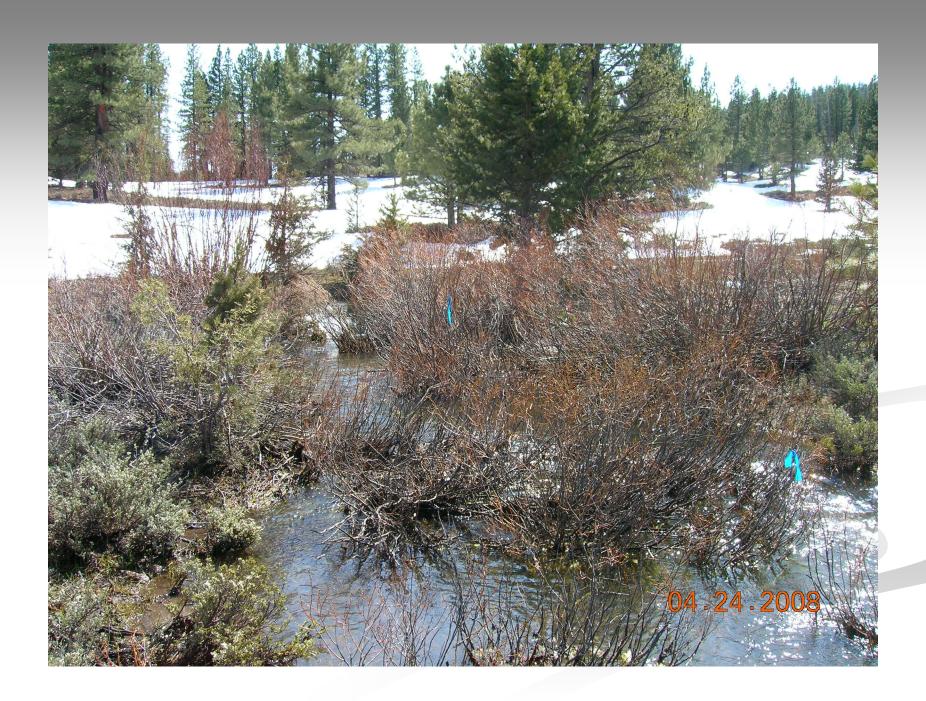
For more info: www.truckeeriverwc.org

## What's the problem?

- Active headcutting
- Further instability
- Groundwater loss







#### **Davies-Merrill timeline**

2005: Sites 5 & 6

2006: Sites 2, 5 & 12

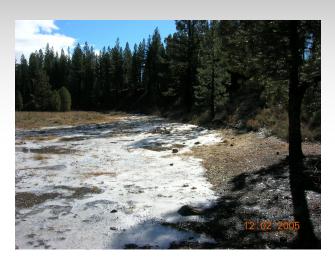
2007: Sites 2, 3, 4

2008: Project planning 8, 9, 10

2009: Start construction at 8, 9, 10

Monitoring on-going

#### December 2005





- First storm
- Stream in remnant channel
- Plug #1 low
- Sandbags added

# January 2006

- Heavy rain event
- November fix held





